

Statewide Strategy for Public Health Education and Research

In November 2001, the Council on Postsecondary Education authorized the University of Kentucky and the University of Louisville to take the initial steps necessary to create schools of public health, indicating it would revisit the public health issue no later than 2004. At its July 2003 meeting, the Council formed an advisory committee to develop a statewide strategy for public health education and research that would mobilize postsecondary resources to meet Kentucky's pressing public health needs and inform the Council's work in the public health area. The advisory committee included the four deans for graduate public health programs at the public postsecondary institutions (Eastern Kentucky University, University of Kentucky, University of Louisville, and Western Kentucky University), Kentucky's Commissioner of Public Health, and the Council's Vice President for Academic Affairs. In consultation with Dr. Harrison Spencer, President of the Association for Schools of Public Health (ASPH), the Council on Education for Public Health (CEPH, the public health accrediting body), and other state postsecondary and public health leaders, the advisory committee has developed this **Statewide Strategy for Public Health Education and Research**. The strategy focuses on postsecondary education's contribution to Kentucky's public health through meeting both current and future needs of the public health workforce and enhancing Kentucky universities' competitiveness in attracting extramural research funding to address health problems for both Kentucky and the nation. It calls for increased collaboration between public health programs in the academic sector, public health organizations, the private sector, and communities.

As a state, Kentucky is in the midst of launching a comprehensive program to improve public health and in doing so increase its economic competitiveness, enhance its quality of life, and reduce burgeoning health care costs that threaten the state's ability to provide other essential government services. This strategy aligns postsecondary education efforts with the state initiative.

The Public Health Challenge

Kentucky suffers from a number of public health problems. Poor nutrition, obesity, physical inactivity, diabetes, inadequate water and waste treatment systems in some communities, drug and alcohol abuse, domestic violence, environmental pollution, smoking, heart disease and strokes, and a variety of cancers are exacting a devastating toll on the Commonwealth. Nationally, Kentucky ranks 39th among states in negative health outcomes, 36th in health risk factors, and is among the bottom 10 states for 8 of the 17 individual measures of unhealthy behavior patterns. The relative rank of Kentucky on these public health indices has changed little in over a decade. Moreover, these rankings do not reflect the emerging threats to public health from SARS, influenza outbreaks, and sexually transmitted diseases including HIV/AIDS.

Medicare and Medicaid expenditures are so large and are growing so fast that without raising taxes to historic highs, today's spending rates will probably be unsustainable in coming decades (Congressional Budget Office, 2003). The Congressional Budget Office (CBO) lists three

options to restrain federal spending: reduce the number of people receiving benefits, reduce the share of the cost paid by the government, or reduce the total cost per beneficiary. Reducing the number of people receiving federal benefits and reducing the cost paid by the federal government may reduce federal expenditures, but will likely have no effect on total health care expenditures because state and local government or the individual must assume the former federal burden. It is only through improving population health status to reduce the consumption of health care services that total health care expenditures will be reduced. In order to reduce the consumption of health care resources, public health programs must play an active role by educating the public about known health risks, such as smoking and obesity, and by informing the health care community and the population about effective management of chronic disease.

Policy makers and the general public must understand that if these measures are not taken, the growing consumption of health care services will lead to a disproportionate increase in health care expenditures that will divert funding from other vital public services, such as education, roads, law enforcement, and critical public health functions such as emergency preparedness.

Kentucky Governor Ernie Fletcher summarized these realities effectively:

“The principles and strategies guiding my recommendations reflect a singular goal, to increase economic opportunity by making Kentucky competitive; a competitive Kentucky that provides a world class education and provides skills and lifelong learning that empower citizens to choose healthy lifestyles, where families and government are not overwhelmed with the cost of healthcare.

A bold new plan of action is required. That plan will enable us to empower every participant to make meaningful choices which affect their own health . . . a new plan with health education programs and healthy lifestyle incentives, exercise programs, obesity, smoking and disease management, and drug cost controls.”

Although the rationale for investing in public health research is compelling from a human suffering and disease reduction standpoint, public health research also is about economic development. Investments in understanding the nature, extent, causes, and consequences of public health problems will result in healthier citizens and communities. Reductions in the statewide burden of health care costs will yield funds that can be better applied to other investments for economic development, such as P-16 education. The prize is a healthier population and significant reductions in the fiscal burden currently borne by the Commonwealth. This prize cannot be delivered without a well-prepared workforce, new collaborative research partnerships, and a research agenda focused on improving health and health care in the Commonwealth.

“Public health is the science of preventing disease, prolonging life, and promoting physical health and efficiency through organized community effort” (Hanlon, 1969). Since 1878, Kentucky’s public and private health organizations have worked together to respond to a variety of communicable diseases, disasters, and other challenges to the public’s health. While public health challenges began with fighting communicable disease, in the past century they have expanded to include injuries, chronic diseases, toxins, and more recently bioterrorism and emergency preparedness.

As the challenges to public health have changed:

- The resources to meet those challenges have declined relative to the demand.
- Health care costs as a percent of the Gross Domestic Product have risen threefold since 1966, from 5 percent to 15 percent in 2004 with the cost of family health insurance now over \$5,000 per year.
- The resources available for acute care have expanded as medical science has contributed to more sophisticated and expensive individual treatment regimens. Both those with and without health insurance in emergency situations use these high-cost resources. The latter cases are frequently unreimbursed.
- The resources to educate and train a new public health workforce have become particularly critical due to the aging of the existing public health workforce and the need to improve proficiency in use of the technology and methods necessary to meet new public health challenges.
- Although resources devoted to personal health care have expanded, the collaborative relationships between public and private health care providers have suffered.

The good news is that the majority of these negative indicators are amenable to change and that the public health research infrastructure of Kentucky is already partially formed. Health indicators can be changed at the individual level, within families, schools, and neighborhoods, and across communities of the Commonwealth. A strategic plan for public health education and research that builds on the existing infrastructure to specifically target these indicators is feasible and necessary.

Meeting the Challenge: Educating the Public Health Workforce

In order to improve the health and quality of life of Kentuckians, the public health workforce must be ready to address existing and emerging public health problems in terms of practice and leadership. Current public health workers must have access to professional development. Kentucky also must expand the number of people prepared to perform essential public health services.

This strategic plan is designed to maximize postsecondary education's contribution to addressing public health education needs. It builds on recent national efforts to refocus funding and programmatic initiatives on public health solutions to health problems, such as the 2002-2003 Institute of Medicine (IOM) report.

The National Context

A 2003 draft report by the Committee on Workforce Development of the American Public Health Association and the Association of Schools of Public Health states that nationally:

- a) Fifty percent of the public health workforce lacks formal academic training in public health.
- b) Limited organized programs are available to help currently employed public health workers obtain formal training in public health.

- c) Limited undergraduate offerings are available in public health to help train the workforce and assist in attracting individuals to a career in public health.
- d) Efforts must be made to provide the public health workforce with the critical new content areas in public health (e.g., informatics, genomics, communication).

The federal Department of Health and Human Services (DHHS) report, *The Public Health Workforce: An Agenda for the 21st Century* (1997), summarizes 25 years of studies that assess the composition, size, function, and adequacy of the public health workforce. The studies continuously encountered the following three problems as they sought to assess the public health workforce: lack of clear professional classification, absence of consistent credentialing requirements, and a preponderance of discipline-specific training in areas other than public health.

In two well-referenced reports, the Institute of Medicine has documented the nation's current and future health challenges. *The Future of the Public's Health in the 21st Century* (2002) addressed the general status of the nation's public health infrastructure and found it to be in disarray. The report identified the core functions of a public health system as assessment, policy development, and assurance. Epidemiology, biostatistics, environmental health, health services management, and social and behavioral science are the technical competencies needed to accomplish the core functions.

The second publication, *Who Will Keep The Public Healthy? Educating Public Health Professionals in the 21st Century* (2002), summarizes the history of the public health system, identifies changes in health risk factors, identifies changes in funding, and, most importantly, documents the general lack of public health training in the public health workforce, especially its leaders. It also identifies several additional competencies needed for modern day public health practitioners, teachers, and researchers. Those competencies are informatics, genomics, communication, cultural competence, community-based participatory research, policy and law, global health, and ethics.

The report goes on to recommend that schools and programs of public health should:

- Educate future educators, practitioners, and researchers, and prepare public health leaders and managers.
- Serve as a focal point for multi-school transdisciplinary research as well as traditional public health research.
- Contribute to policy that advances the health of the public.
- Work collaboratively with other professional schools to assure quality public health content in their programs.
- Assure access to life-long learning for the public health workforce.
- Engage actively with various communities to improve the public's health.

The report makes several recommendations for local, state, and federal health agencies that have implications for postsecondary public health education:

- Actively assess the public health workforce development needs in their own state or region, including the needs of both those who work in official public health agencies and those who engage in public health activities in other organizations.

- Develop plans, in participation with accredited schools of public health and accredited public health programs in the region, for assuring that public health education needs are addressed.
- Develop incentives to encourage continuing education and degree program learning.
- Engage in faculty and staff exchanges and collaborations with schools of public health and accredited public health education programs.
- Assure that those in public health leadership and management positions within federal, state, and local public health agencies are public health professionals with a master's in public health or higher-level education, or comparable public health skills.

Finally, *Healthy People 2010* (DHHS, 2000) identifies the competencies that must be developed to accomplish improved population health as follows:

“In addition to a basic knowledge of public health, all public health workers should have specific competencies in their areas of specialty, interest, and responsibility. Competent leaders, policy developers, planners, epidemiologists, funders, evaluators, laboratory staff, and others are necessary for a strong public health infrastructure. The workforce needs to know how to use information technology effectively for networking, communication, and access to information. A skilled workforce must be culturally and linguistically competent to understand the needs of and deliver services to select populations and to have sensitivity to diverse populations. Finally, technical competency in such areas as biostatistics, environmental and occupational health, the social and behavioral aspects of health and disease, and the practice of prevention in clinical medicine should be developed in the workforce. Although the disciplines in a particular agency will vary according to the resources, policies, needs, and populations served, individual public health employees must have certain competencies or levels of expertise. Their combined areas of expertise enable the organization to provide essential public health services.”

Meeting Kentucky's Workforce Needs

The condition of the public health workforce in Kentucky mirrors the national description in these IOM reports. These recommendations for the nation are relevant to state and local health departments and other Kentucky organizations involved in public health. They inform the recommendations offered here to improve public health education.

Public health workers have had access to training in the technical skills necessary to address clinical/individual health care needs in their localities. However, they have had very limited formal training in areas that the Institute of Medicine has defined as fundamental to public health: the traditional areas of epidemiology, statistics, health services management, social and behavioral science, and environmental health, and the newly significant areas of informatics, genomics, communication, cultural competence, community-based participatory research, policy, law, and ethics. All of these skills must be present in the public health workforce to ensure that the public is protected and that lay individuals acquire the necessary skills to participate in the management of their own health.

A significant investment in formal public health education is needed to address these deficits. Public health workers and others dealing with population health issues must be appropriately trained to perform the functions mandated for the public health organizations and to conduct research that helps determine the best public health approaches for Kentucky. The Commonwealth's public health workforce must not just collect data on health issues. They also must convert data into information, information into knowledge, and knowledge into effective public health interventions. The investment must be in the education of public health professionals so they can more efficiently and effectively provide information to individual citizens to protect their health and reduce the consumption of health services.

Building the Infrastructure

Kentucky currently has one accredited program in public health and three other universities offering graduate degrees (Appendix 1). Policy discussions at the national level are focused on developing credentialing requirements for the public health workforce involving graduating from an accredited public health program and continuing education from accredited graduate public health programs. The Health Professions Education Summit concluded, "Educators and accreditation, licensing, and certification organizations should ensure that students and working professionals develop and maintain proficiency in five core areas: delivery of patient-centered care, work as part of interdisciplinary teams, practice evidence-based medicine; focus on quality improvement; and use of information technology" (2003). This "bridge to quality" in healthcare must be the responsibility of institutions that are accredited to provide such credentialing. Creating accredited programs will position Kentucky to accommodate to national standards.

To better serve the public health student and provide workforce training and continuing education attainment, seamless transfer of courses from community and technical schools to bachelor and graduate programs that include online courses and common credentialing must be a priority. Expanding availability of accredited programs at the four graduate public health institutions will promote easy transfer, since the transfer of credits between accredited and non-accredited programs is difficult. Not only will this transfer of coursework assist public health students across the Commonwealth, but it also will serve the present and future workforce with credentialing and continuing education requirements.

Policies to promote access and collaboration among public health programs at the four institutions have been developed and are recommended by the advisory committee for Council approval as part of this strategy (Appendix 2). A P-16 strategy to inventory undergraduate programs and to create a seamless system to increase the pool of educated public health workers is recommended by the advisory committee (Recommendation 1.3.3). These recommendations include enhancement of current public health workforce professional development opportunities through creation of online modularized core courses required for a master's degree in public health (Recommendation 1.2).

Building Career Paths and Incentives

Providing easy access to public health education throughout the Commonwealth will provide career paths for the educational advancement of the present public health workforce and attract more people into public health careers. Having more offerings in public health education will help assure a competent public health and personal health care workforce. Incentives must be provided as well. The Kentucky Department for Public Health estimates the total cost of salary increases to pay an incentive for advanced degree attainment in 2004 dollars would be approximately \$600,000 per year. If postsecondary education builds an accessible infrastructure providing public health education, this investment will be necessary to ensure utilization. (Recommendation 2.0)

Engaging the Greater Public Health Community

Public health education must reach a broad community in addition to those who participate directly in providing public health services. Members of boards of health, policy makers, public officials, human resource managers, personnel benefits managers, and students pursuing undergraduate degrees in the health sciences, law, and political science are among those who would benefit from a stronger understanding of public health issues. Finally, the general population benefits from broader public health education because individuals and families must play a role in promoting healthy lifestyles to prevent and control disease.

This strategic plan and the recommendations it offers are designed to better position Kentucky's postsecondary institutions to engage the public and private sector in programs to improve public health. Additionally, the plan addresses current and projected workforce needs through enhanced professional development and graduation from accredited programs of increased numbers of students with formal public health training.

Meeting the Challenge: Increasing Public Health Research & Scholarship

The plan includes recommendations that mobilize postsecondary resources around accredited postsecondary public health programs to increase the extramural funding, scope, and quality of public health research in Kentucky. The collaboration and combined resources of the four academic programs will permit Kentucky to be increasingly competitive for funding for public health research, consultation, and public health practice and application grants and contracts.

Three primary "traditional" sources fund public health research: 1) the National Institutes of Health (NIH) encompass 17 institutes and a number of centers, 2) the Centers for Disease Control and Prevention (CDC), and 3) the Health Resources Services Administration (HRSA). The Departments of Agriculture, Energy, Education, Labor, Homeland Security, and other large federal agencies also fund public health research. Private national, regional, and local foundations such as the Annie E. Casey Foundation, the Robert Wood Johnson Foundation, the Kellogg Foundation, and others have been extremely helpful in supporting Kentucky health research.

There is more funding available for public health research than ever before – by a large multiplier. In addition to significantly larger amounts of available funding, the more traditional funding streams have moved rather decisively away from research dominated by a single discipline to an emphasis, even a requirement, for interdisciplinary research. The IOM has recommended that schools of public health establish new relationships with other health science schools, community organizations, health agencies, and groups within their region.

The research component of this plan will attract additional funding for public health research conducted by the graduate public health related programs at Kentucky's universities, in collaboration with a variety of public health organizations, nongovernmental organizations (NGOs), and communities.

The accreditation of schools of public health at the University of Kentucky and the University of Louisville alone will permit academic public health programs in Kentucky to compete for \$80 million in federal extramural funding reserved for accredited schools of public health.

Collaboration among faculty at the two schools and two accredited programs will provide the critical mass necessary to be competitive for national funding. Faculty members and administrators in the graduate public health programs must collaborate to effectively serve the health promotion needs of the Commonwealth. Developing collaboration between institutions strengthens Kentucky's competitiveness against larger institutions. Kentucky's aggregate faculty numbers, across the four programs, are still below the median number of faculty for individual schools of public health nationally. Kentucky's largest school would rank in the bottom third in the number of faculty. Figure 1 indicates the number of faculty and graduate degrees offered at each of the Kentucky institutions. Kentucky must create accredited schools and programs to facilitate collaboration in education and research initiatives to compete effectively for extramural funding.

Figure 1. Kentucky Programs/Schools of Public Health

Core Disciplines	EKU	WKU	UK	UofL
Biostatistics	1.5	2	5	6
Environmental Health	1.5	4.5	9	3
Epidemiology	3	5	7	4
Health Behavior	1	2	7	3
Health Services Management	2.5	3	8	3
Other	5.5	2	5	0
Total Faculty	15	18.5	0*/41**	19*/34**
Degrees				
Master's Degrees	3	2	1	2
Doctoral Degrees			2	2

* Current Faculty

** Faculty as accredited School of Public Health

Excellence in public health research provides the foundation for efforts to improve the health status and well being of individuals and communities in the Commonwealth and thereby to improve their economic and social condition. Stakeholders include the public health practice community, private business interests, health related associations, charitable organizations, medical and health professional organizations, primary and secondary school health educators, and the general public.

Building the Infrastructure

The plan for enhancing Kentucky's capacity to conduct public health research builds on the existing public health infrastructure in Kentucky.

- 120 county boards of public health
- Professional statewide health associations with historical partnerships with public health initiatives (Kentucky Medical Association, Kentucky Dental Association, Kentucky Pharmacy Association, Kentucky Nursing Association, Kentucky Public Health Association, Kentucky Hospital Association, etc.)
- A strong public television system and schools with high speed Internet connections
- 120 county Cooperative Extension Programs
- Nonhealth organizations with historical partnerships with public health (e.g., Kentucky League of Cities, Chambers of Commerce)
- Public health students requiring practical experience in research at the community level
- Collaborative relationships between the Kentucky Department for Public Health, four graduate public health programs, and the Council on Postsecondary Education
- Council on Postsecondary Education Research Challenge Trust Fund's enhancement of public health researchers statewide
- Faculty and administrators committed to collaborating to link teaching and research with public health problems

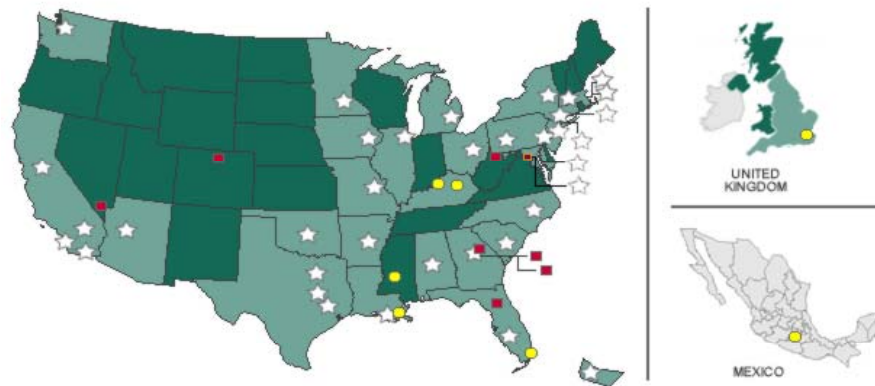
The plan's recommendations organize these resources around a restructured postsecondary public health program to increase the extramural funding, scope, and quality of public health research in Kentucky. As noted, the collaboration and combined resources of the four academic programs will permit Kentucky to be increasingly competitive for funding for public health research, consultation, and public health practice and application.

Already, other states are mobilizing to access the increased resources for public health research available only to accredited schools and programs. Currently there are 33 accredited schools of public health with nine additional ones in the process of becoming accredited. There are a number of states that have more than one accredited school of public health (California, New York, Massachusetts, and Texas) and five states have applications for additional schools currently under review (Louisiana, Florida, Pennsylvania, and Connecticut). The number of accredited schools of public health has increased in the last decade, and student applications have increased 51.3 percent since 1993 (Association of Schools of Public Health, 2003).

Figure 2

CEPH Schools of Public Health

Existing* - Seeking Accreditation** -
Interested in Accreditation***



Source: Council on Education for Public Health, June 2004

- *White stars: Existing CEPH accredited Schools of Public Health.
- **Yellow stars: Those schools currently seeking accreditation.
- ***Red stars: Those schools interested in establishing School of Public Health.

Recommendations and Objectives

Kentucky's public health delivery system, funding priorities, training, and research policies need to reflect the changes in the state and the nation. The primary purpose of the plan is to elevate the public health system's ability to improve the state's health status. Consistent with the Centers for Disease Control and Prevention's *Futures Initiative* (2003), the public health delivery system must be restructured to provide services and activities that will help individuals manage their own health, particularly during public health emergencies. This plan is a first step.

The Council on Postsecondary Education's Public Health Advisory Committee, after reviewing the recommendations of the leading public health organizations, Association of Schools of Public Health (ASPH), American Public Health Association (APHA), the Institute of Medicine report, and the programs and resources available through the postsecondary system, makes the following specific recommendations:

RECOMMENDATION 1: Increase capacity of education programs to meet the state's needs for public health services.
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Objectives

- 1.1. Pursue appropriate accreditation by the Council on Education for Public Health (CEPH) for the four graduate programs in public health (schools at UK and UofL, and program accreditation at ECU and WKU):
 - 1.1.1. Promote collaboration among academic programs and institutions.
 - 1.1.2. Enhance research at the four graduate programs in public health that addresses public health problems.
 - 1.1.3. Collaborate in the development and delivery of online courses for graduate students that address issues of full transfer of credit, common tuition, and common scheduling (Appendix 2).
- 1.2. Increase access to public health training and degree-granting programs.
 - 1.2.1. Establish competency-based curricula through an active partnership between the academic programs and the public health practice community.
 - 1.2.2. Encourage dual academic degrees between other professional schools and public health.
 - 1.2.3. Design loan forgiveness, scholarships, and grant programs for public health students.
 - 1.2.4. Develop and deliver modularized academic courses permitting multipurpose usage for continuing education, certification, and credentialing programs serving the current workforce.
 - 1.2.5. Improve distance learning systems with appropriate mentoring and contact with practice-based professionals.
 - 1.2.6. Utilize homeland security and other existing modules available online.
 - 1.2.7. Utilize existing resources such as mobile health units for both education and provision of service.
- 1.3. Strengthen collaboration among the educational community.
 - 1.3.1. Inventory undergraduate two- and four-year public health and related programs.
 - 1.3.2. Collaborate with other academic programs (public and school health nursing, health education, health communications, dental hygiene, social work, dietetics, communications, environmental health/environmental engineering, work site, health promotion, and other medical care providers) to ensure a competent entry-level public health workforce.
 - 1.3.3. Promote public health education and careers in K-12 schools, KCTCS, P-16 Councils, and Area Health Education Centers (AHEC).
 - 1.3.4. Provide seamless advancement from associate to baccalaureate to graduate degree programs in public health.
- 1.4. Train lay health workers and community residents to understand and contribute to the mission of public health.
- 1.5. Promote public-private partnerships with employers who rely on individuals educated in public health competencies such as manufacturers with on-site occupational health workers and biomedical research firms employing biostatisticians.

RECOMMENDATION 2: Strengthen coordination between academic institutions and the Kentucky Department for Public Health.

Objectives

- 2.1. Encourage the Kentucky Department for Public Health to strengthen leadership, assessment, and planning efforts and to coordinate workforce development and planning activities with academic programs.
 - 2.1.1. Change certification and credentialing of public health workers tied to state public health competencies.
 - 2.1.2. Provide career development economic incentives.

RECOMMENDATION 3: Strengthen collaborative public health research within and across public/private universities and colleges.

Objectives

- 3.1. Identify faculty at universities in public health programs willing to become involved in research partnerships that transcend discipline-specific departments.
- 3.2. Eliminate competitive barriers limiting cross-institutional research.
- 3.3. Market Kentucky as a collaborative public health transdisciplinary/collaborative laboratory to external funders.

RECOMMENDATION 4. Strengthen public health research partnerships with communities.

Objectives

- 4.1. Emphasize community-based participatory research models, involving local public health officials and community members.
- 4.2. Select “sentinel communities” for integral research collaboration and establish and maintain bases of community health profiles.

RECOMMENDATION 5. Link public health research with public health practice.

Objectives

- 5.1. Identify and link extramurally funded research centers to public health practice (e.g., Southeast Center for Agricultural Health /Injury Prevention, Kentucky Injury Prevention Research Center, Center for Prevention Research, Center for Deterrence of Bio-Warfare and Bioterrorism, Institute for Rural Health Research and Development, Institute for Bioethics, Health Policy, and Law, and others).

- 5.2. Utilize the longstanding community influence of the Cooperative Extension Service.
- 5.3. Emphasize public health practice that will reduce health disparities by race, gender, geography, and economic class.

RECOMMENDATION 6: Increase funding from traditional federal sources (NIH, CDC, and HRSA) and seek additional public/private funding resources.

Objectives

- 6.1. Obtain and sustain accreditation for schools (UK and UofL) and programs (EKU and WKU).
 - 6.1.1. Gain access to \$80 million of training and research funding through cooperative agreements with the Association of Schools of Public Health (ASPH).
 - 6.1.2. Provide the research infrastructure for UK and UofL to meet HB1 research funding goals for 2020.
 - 6.1.3. Develop the critical mass of public health investigators to compete effectively for extramural funds.
- 6.2. Investigate other governmental funding sources through the Departments of Agriculture, Defense, Energy, Education, Homeland Security, Labor, etc.
- 6.3. Connect public health research to other health-related professions, with collaboration particularly in biostatistics, epidemiology, and environmental health.
- 6.4. Focus on securing funding addressing Kentucky public health issues that most affect quality of life.

RECOMMENDATION 7: Establish an on-going statewide public health advisory committee to advise the Council on Postsecondary Education on public health issues and implementation of the Statewide Strategy for Public Health.

Appendix 1. Institutional PH Descriptions

MPH/College of Health Sciences Eastern Kentucky University

Eastern Kentucky University's College of Health Sciences has offered a baccalaureate degree in Public Health (formerly Community) since 1972 and a graduate program since 1975. The baccalaureate program is approved by the Society of Public Health Education (SOPHE) and the Association for the Advancement of Health Education (AAHE). Currently the program at the master's level has been incorporated into a Master of Public Health (MPH) with options in Community Health, Public Administration, and Alcohol and Drug Dependency. The options are available through these departments: Health Promotion and Administration, Environmental Health, and Government. Three classes of students have graduated from the MPH program currently seeking accreditation by the Council of Education for Public Health.

The MPH program is designed to meet the needs of traditional and nontraditional students with classes available on a wide range of subjects in a wide range of mediums to include: executive style, Saturday only, night, late afternoon, Internet, distance learning, and day classes.

Faculty and students participate in a wide range of research and service projects. Current research and service projects involving the program options in public health are with voluntary organizations, government agencies, and private corporations within the expertise of the faculty within the units in the College of Health Sciences.

Eastern Kentucky University's College of Health Sciences also operates grants from the Centers for Disease Control and Prevention, Kentucky Department of Education, and Kentucky Department of Public Health as well as contracts with foundations, state agencies, and private corporations.

The Master of Public Health degree prepares professionals for leadership positions in public health at local, state, and national levels. Graduates develop, plan, and implement health promotion and disease prevention programs, environmental health programs, and public administration programs with individuals, groups, and communities. The objective of the program is to educate and train a new public health workforce for the Commonwealth of Kentucky and the nation.

Kentucky Department for Public Health

The Kentucky Department for Public Health has statutory and budgetary requirements related to its mission to promote good health and prevent illness and injury. It accomplishes its mission through a variety of arrangements with local health departments, other public providers, and the private sector designed to enforce public health regulations, maintain surveillance (gather information) on the distribution of diseases and other conditions, provide public health education information, prevent the spread of communicable diseases, develop public health policy, identify ways to reduce health risks, and respond to disasters. Other arrangements provide for a variety

of personal preventive health services offered through public health departments and other providers in areas of maternal and child health, chronic disease management, etc.

The active involvement of the four graduate programs in public health offered by the state's universities has provided the skills, knowledge, and ability for the public health workforce to perform its tasks more effectively. Health educators from Western Kentucky University, environmental health scientists from Eastern Kentucky University, epidemiologists and health care managers from the University of Kentucky, and information system specialists and experts in bioterrorism from the University of Louisville have all strengthened the state's preparedness and performance. Opportunities to include the teaching and research faculty from these institutions as formal partners in the evaluation of programs funded by state and federal funds will surely lead to better decisions based on better analysis of existing data sets.

University of Kentucky College of Public Health

In addition to the University of Kentucky's Martin School which offers an MPH in public affairs and health administration, the University of Kentucky College of Public Health offers the Master of Public Health (MPH) and the Doctor of Public Health (DrPH) as practice oriented degrees in the five core disciplines of public health (biostatistics, environmental and occupational health, epidemiology, health behavior, and health services management), along with a research oriented PhD degree in gerontology. The two doctoral programs are the only such offerings in the Commonwealth. The college includes 41 primary appointment faculty along with 57 joint or associated faculty and a research and support staff of 46 individuals. The mission of the college reflects the university's land grant status, attention to rural community needs, and a service and research orientation in public health, as well as instruction. Addressing this focus, the College of Public Health has a current enrollment of over 110 MPH students, and 74 DrPH and PhD students. Over 40 percent of students are working and nontraditional students. Minorities represent 24 percent of the student population. Graduates are located in numerous local health departments statewide. Strong relationships including shared faculty and joint appointments have been established with other university colleges and departments including agriculture, engineering, and statistics. The college is located in the A.B. Chandler Medical Center and currently offers a dual MD/MPH degree with the College of Medicine, and is exploring other dual degree options. The enrollments in the MPH and DrPH degree programs, since fall 2000, have included 30 students who have health professional degrees (MD, DO, DMD, DVM). The college has over \$17 million in active research funding and includes among its units the Kentucky Injury Prevention Center, the Center for Prevention Research, and the Southeast Center for Agricultural Health and Injury Prevention. In addition to the individual service endeavors of students and faculty, the college has partnered with the Kentucky Department for Public Health and the Centers for Disease Control and Prevention to offer the Kentucky Public Health Leadership Institute for current practitioners, is a partner with the University of North Carolina in the six state Southeast Public Health Training Center, and has collaborated with the Saint Louis University School of Public Health in bioterrorism preparedness. The college is scheduled for a Council on Education for Public Health (CEPH) accreditation site visit in September 2004.

University of Louisville
School of Public Health and Information Sciences

The University of Louisville School of Public Health and Information Sciences (SPHIS) offers the Master of Public Health (MPH), Master of Science (MSc) in Epidemiology and Clinical Investigation Sciences, Master of Science in Public Health (MSPH) in Biostatistics-Decision Science, PhD in Epidemiology and Clinical Investigation Sciences, and PhD in Biostatistics and Decision Science.

The MPH is a practice oriented degree in the five core disciplines in public health and will offer major concentration areas of study in epidemiology, biostatistics, environmental and occupational health, health knowledge and cognitive sciences, and health management systems sciences. Practicum experiences will be offered through the Metro Louisville Health Department and will provide a valuable contribution to the community. The initial MPH class will be enrolled in the fall of 2005.

The MSc in Epidemiology and Clinical Investigation Sciences is funded through an NIH Curriculum Development Award (K-30). The goal of the program is to provide support for the development of didactic training in the skills, methodology, theories, and conceptual framework needed by independent, clinical investigators. UofL program trainees have received over \$6 million in research funding. The K-30 program is one of two training programs in the state of Kentucky.

The MSPH in Biostatistics-Decision Science (or formal decision analysis) is an emerging, cutting edge discipline that provides researchers with additional tools with which to develop the clinical and health care policies and guidelines that affect public health. The MSPH program at UofL goes beyond traditional decision science programs by providing a mathematically rigorous interdisciplinary approach to decision-making that is capable of adapting to the everchanging health care environment. Students who complete the MSPH or who already possess the equivalent of an MSPH in Decision Science may apply for admission to the PhD program.

The PhD in Epidemiology is a research-oriented degree and offers two tracks – translational research and health services and outcomes research. Students who focus on the area of translational research will study the development and testing of new pharmaceutical agents and biomechanical devices (i.e., the historical definition of clinical research). They will be trained to become research scientists capable of participating in all phases of the development and testing of new investigational drugs and biomedical devices. They will be able to identify promising new chemical compounds or devices, conduct initial tests for safety, seek FDA approval for clinical use, conduct Phase IV clinical trials of health outcomes, and establish “clinical guidelines” for their use in practice. The health services and outcomes research concentration trains students to conduct patient oriented, population based clinical research, to assess the effectiveness and efficacy of alternative health service delivery systems or treatment modalities, and to design and/or evaluate federal and state health programs to improve the health status of specific populations. Because of the broad array of foci in health services and outcomes research, the curriculum for this concentration is designed with maximum flexibility in mind.

The PhD in Biostatistics-Decision Science has been designed to maximize student access to a much needed public health educational program and capitalize on the strengths and areas of expertise of current faculty. The program has been configured to meet the needs of two distinct groups of prospective students: post-baccalaureate students seeking a master's or doctoral degree in Biostatistics-Decision Science and post-doctoral students (DMDs, JDs, MDs, PhDs, etc.) seeking to enhance their clinical research abilities by earning a second advanced degree. The PhD provides advanced training in the theory and methods of formal decision analysis, with the goal of enabling the student to someday carry out their own original research.

The school is scheduled for a Council on Education for Public Health (CEPH) accreditation site visit in March 2006.

Western Kentucky University

Western Kentucky University has offered a baccalaureate degree in public health (formerly community health) since 1971 and a graduate program since 1975. The baccalaureate program is approved by the Society of Public Health Education and the Association for the Advancement of Health Education. The program offers options in public health education, school health, and environmental health. The Master of Public Health (MPH) program received accreditation by the Council on Education for Public Health in 2001 and offers options in public health education and environmental health.

The MPH program is designed to meet the needs of both traditional and nontraditional students, with evening, weekend, and Web-based courses available. The program also participates in the Kentucky Virtual University. Graduate assistantships are available for full-time students.

Faculty and students participate in a wide range of research activities. Current research projects include: analysis of water quality in rural water districts, assessment of weapons of mass destruction related knowledge among emergency medical personnel, evaluation of bioaerosols in the workplace, preparedness of Kentucky hospitals for mass casualty events, evaluating state level health care reform and access to health care, assessing pediatric obesity, and assessing bioterrorism preparedness in emergency medical services.

Western's Department of Public Health also operates the Environmental Health and Safety Resource Center, the Kentucky Emergency Medical Services Academy, and the Hazard and Emergency Awareness Mobile Training Unit. These services provide training and technical assistance to industry and health service organizations in the areas of hazardous materials management, disaster preparedness and management, and emergency medical services. Public health students participate in many of these activities.

Appendix 2. Council Recommended Institutional Agreements

To foster collaboration and promote creation of a cooperative structure for a partially online, modularized MPH to increase enrollment, effectively share resources, and meet workforce needs, the institutions offering the MPH should strongly consider implementation of the following recommendations for the 15 hours of coursework included in the cooperatively offered *core curriculum* (epidemiology, statistics, health services management, health behavior, and environmental health):

Tuition

- Provision of a common in-state and a common out-of-state tuition rate for public health students, based on the average of in-state or out-of-state tuition charges by the four institutions, including distance learning fees.
- Establish mutually agreed upon *continuing education fees* by the four institutions.

Joint Admissions

- Degree-seeking student admissions should be based on acceptance of application through each student's home institution.
- Degrees should be conferred by a student's home institution.
- Grades should be assigned by teaching institution and posted at the student's home institution.

Courses

- Course numbers should be common to all institutions or cross-listed, if offered for credit in multiple departments.

Library resources

- All students at all institutions should have full access to library resources.
- University of Kentucky, where the library resources' server is located, should assign individual student e-mail addresses for library access through UK.

Transfer

- Up to 15 hours can be transferred between institutions in the core public health curriculum. Students taking a "special topics" course must enroll in the institution offering the course.

Faculty load, pay, and credentials

- Teaching load and salaries should be determined by each institution.
- For public health instructors teaching in the core curriculum, credentials should be approved by all institutions.
- Each public health faculty member should hold a joint/adjunct faculty appointment at each institution.

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